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The design of new careers involves technical and strategic considerations and commitment on the part of employers that transforms dead-end jobs into opportunities for growth and makes the technical and strategic guidelines relevant. Technical guidelines include (1) titling positions to reflect commitment to a career, (2) using selection procedures that recognize the range and development of potential, (3) structuring tasks to allow for higher functional attainment and increased discretionary functioning, (4) providing supervision that implements the growing of people as well as the achieving of production standards, (5) providing regular increases in compensation to correspond with increased experience and competence, and (6) providing training and growth opportunities for those who can and need to achieve higher functional performance. Strategic guidelines include: (1) directing opportunities for new careers primarily at the poor and disadvantaged, (2) developing new careers primarily in the newly emerging community and health services work fields, and (3) initiating new careers by resorting to both short-and long-term approaches, and, especially, by avoiding assumptions that ignore the realities of professionalization. (JK)

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Guidelines for the Design of New Careers

Sidney A. Fine

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THE W. E. UPJOHN INSTITUTE FOR EMPLOYMENT RESEARCH
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STAFF PAPER

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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By 2
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September 1967

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Preface

This paper is an outgrowth of a workshop held for the Model Cities Conference on Manpower Development on June 15, 1967, and conducted by the New Careers Development Center of New York University, of which Dr. Frank Reissman is director.

The author's views should not be misinterpreted as positions of the W. E. Upjohn Institute for Employment Research.

Sidney A. Fine

Washington, D.C.
September 1967

The W. E. Upjohn Institute for Employment Research

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Contents

Preface v

Introduction 1

Technical Guidelines 3

Titling 3

Selection Procedures 4

Structuring and Specification of Tasks 5

Supervision and Performance Evaluation 9

Pay and Fringe Benefits 9

Training 10

Strategic Guidelines 11

Who Are the Beneficiaries? 11

What Work Fields? 13

How Initiate Careers? 13

A Suggested Application 17

Summary 20

Appendix 23

Guidelines for the Design of New Careers

Introduction

Two men working side by side may be performing the same simple tasks, yet for one the activity is merely a job and for the other it is a step in a career ladder. The first worker feels "used," unvalued, disposable; the second feels involved, valued, committed.

There is a sound basis for these differences in feeling, although not apparent from superficial job analysis. The differences may start with the job title—one worker is called a "laborer," the other a "trainee." One worker is told nearly everything he must do, and everything he must do is simple and unchallenging. The other worker has the same assignment, but he has been given leeway to act on his own in certain aspects of procedure. He is not so closely supervised.

If something unexpected occurs for the first worker and he handles it badly, he is likely to be fired; for the second worker, a similar incident may be the occasion for special on-the-job coaching. The first worker has no basis for feeling that what he happens to learn is part of an accumulating trade or craft knowledge on which he can build; the second worker believes that everything he learns, even on a low functional level, may ultimately pay off since he is "learning the business." This worker feels relatively secure because he is accepted and has a stake in what he is doing. The first worker feels insecure and knows he will last on the job only so long as there is more of the same work to be done; he may see himself caught in a "dead end." The second worker believes he is going somewhere.[1]

These differences emerge only after intensive probing. When one inquires "Why?" one finds that the reasons range from shortsighted economics to rationalizations having varying degrees of substance and citing prejudice (racial, national, or religious), nepotism, favoritism, and social class. Still further probing reveals waste of human resources in worker selection and assignment, inefficiency in labor utilization and performance, and worse still, corruption of the personal values on which motivation and achievement depend. For a highly technological and

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[1]This contrasting situation is not, of course, universal. It is relative to the individuals involved, but reflects a common enough situation.

dynamic society which is experiencing skill shortages and which stresses the importance of the individual, these failures represent an intolerable dissonance—an exceedingly costly indulgence. Worse still, these failures make a mockery of the objectives of our educational system. All teaching and vocational counseling provide implicit assurance that education is worth while because it enables one to make the most of opportunities when they occur, and because of the higher payoff in wages and job satisfaction. In fact, we are today seeking ever better ways to inculcate this notion in every student in order to stimulate his achievement and competence motivation. But to what avail will this effort be if our employment system continues to reward people irrelevantly for accidental factors of being or of family relationship rather than for performance and competence? A vicious circle will be intensified, whereby irrelevant status factors continue to gain ascendance over performance factors.

One vital way of reaffirming the goals of our educational system is to put forth greater effort to realize the concept of opportunity for all in the area of work. This can be done by designing all jobs as rungs on career ladders. Thus, all workers would have the door open to develop their potential to the extent that they are willing and able. This calls for commitment on the part of the employers—the first and most essential step in the development of new careers.

In general, employers may indicate their commitment to a career concept in one of three ways:

1. Acceptance of the longevity principle (tenure plus grade increments) either as part of collective bargaining agreements or as a matter of company policy.
2. Specific contractual agreement, as in apprenticeship.
3. Informal acceptance of individuals into specified and career-titled ports of entry.

This commitment should be extended and amplified to encompass all jobs.

Is this aim of equal opportunity unrealistic because of limited "room at the top"—that is, the limited number of better jobs? It is unrealistic only if it is interpreted as requiring promotion for all regardless of individual differences in potential and performance. If the fact of individual differences in potential, motivation, and performance is accepted, the principles of competition and equal opportunity can go a long way toward enabling people to find the jobs that suit and satisfy them. Surely, our implicit faith in the inexhaustibility of job opportunities as a result of evolving technology (a concept always challenged) should be coupled with faith that people will sort themselves out when oppor-

tunity is universally available. While it may be human to seek advantage on the basis of prejudice, discrimination, etc., against others, it is just as human to compete and to accept the rule of merit where conditions of fair competition apply. In any case, we must increasingly recognize the fact that job content is less and less likely to be a source of satisfaction in the sense of self-realization for most people, and that, more and more, satisfaction will need to come from the overall employment situation and leisure-time activities.

Once employer commitment to the career concept of employment is established, it is then practical to apply additional guidelines of a technical and strategic nature. Technical guidelines are intrinsically concerned with tasks, jobs, and the work itself. They relate to the specific conditions suggested above that make a worker feel he is in a job that leads somewhere. Strategic guidelines are of an extrinsic nature, concerned with introducing careers as a realistic program in the working world as we find it. The remainder of this paper concerns these two guidelines.

Technical Guidelines

As noted earlier, it is necessary to look beneath the surface of task performance to see the difference between jobs and careers. We must penetrate to those attitudes, policies, structures, and behaviors of organizations that invest a job-worker situation with "career characteristics." These are the "technical" matters which ultimately must be considered in the design of new careers. They include the titling of the job, selection procedures, structuring and specification of the tasks, supervision and performance evaluation, pay and fringe benefits, and training.

Titling

Certain terms used in titles immediately signal the status of the job as entry onto a career ladder. Among these terms are "learner," "trainee," "apprentice," "junior," "aide," and "assistant." Certain other terms like "helper," "laborer," or "hand" carry a different connotation; namely, that of someone employed only to perform certain limited tasks. Where the first set of terms is used, the concept of career ladder is reinforced by references to subsequent stages of the career as "journeyman/master" and "associate/senior."

In some situations where the original title carries a strong low-status noncareer connotation, employers (and workers) are impelled to devise entirely new titles and terms to suggest that the jobs are more than meet the eye and are actually career situations. Helpers become "first" and

"second" helpers; janitors become "building superintendents"; mechanics become "motor analysts"; salesmen become "sales consultants"; etc.

Thus, in the design of new careers the title is extremely important. It is symbolic of the employer's commitment to the career concept and of the worker's choice of a career rather than a job. Using such titles would be especially necessary for situations where jobs formerly did not have career status and are being included in such a context. An obvious example is that of busboy, which could be retitled "waiter assistant" or "food service aide."

Selection Procedures

When workers are hired as "hands" for jobs, selection is typically limited to a physical appraisal. This can be quite perfunctory as in the case of hiring men for day labor, or it can involve a physical examination when hiring laborers in plants where life and disability insurance are in force. In these job situations, employers have in mind certain specific physical tasks that need to be done on a temporary or continuing basis. There is little interest in the individual and no commitment to provide opportunities for growth and development.

However, where commitment has been made, selection standards and procedures are usually introduced. Typical of the selection methods used, in addition to physical examinations, are tests of general aptitude and language skills, minimum educational requirements such as high school graduation or equivalence, and background requirements such as a "clean record." Such qualifications, plus a probationary work period, usually suffice where only longevity considerations obtain. Presumably such selection procedures are intended to ensure some degree of adaptability in the employee to changing technological and employment conditions.

In the case of apprenticeship and ports of entry, selection can and frequently does become much more specific to ensure interest and temperamental characteristics believed to be appropriate to the career in question. Tests are used for this purpose, but in addition a much more intensive evaluation will be made of the background information (e.g., courses studied or leisure pursuits) obtained in the interview. References will be required. While few of these techniques are adequately validated for the particular careers in question, they are, nevertheless, very widely used. Perhaps the best that can be said for them is that they tend to eliminate highly improbable candidates. Most of all, they are indicative of the employer's commitment.

There is little doubt that selection procedures have been used to discriminate against, eliminate, and reject low-status, disadvantaged

minority group applicants in favor of white middle-class types. However, when these same procedures are employed within the context of using indigenous individuals for careers within the community, they can be regarded as a sign of commitment and sincerity. After all, it is to no one's advantage to employ people for careers for which they are not suited by aptitude and personal preference. This, in effect, abrogates the possibility of growth which is central to the career concept. In this connection it should be noted that the Lincoln Hospital Project in New York made an extremely careful effort in selecting community service aides.[2]

Structuring and Specification of Tasks

We have a better understanding today than formerly of the nature of the "ladder" and of how we must organize tasks into jobs in a career hierarchy to effect the career concept. Thus, we now know that the tasks of entry jobs must be largely prescribed, and that as the worker gains experience he must be granted more discretionary duties. This is what increases his value to the organization. This can be done by making use of the functional concepts included in functional job analysis, and by recognizing the role of critical incidents in jobs as indicators of potential. We now turn to a consideration of the role of these complementary concepts in the design of careers.

Prescribed and discretionary content. According to Brown[3] and Jaques,[4] the *prescribed content* of a job consists of those elements about which the worker has no authorized choice. The prescribed elements are of two kinds: (1) the results expected, and (2) the limits set on the means by which the work can be done. The results of a job are nearly always prescribed in the sense that the object of a person's work is set by the manager and/or supervisor and not by himself. As far as methods of work are concerned, some are prescribed and some are discretionary. The prescribed methods are determined by the equipment available, the physical limits of the job situation, the routines, and general policies governing the methods to be used in pursuing results.

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[2]*Progress Report to U.S. Office of Economic Opportunity on the South Bronx Neighborhood Service Center Program* (New York City: Albert Einstein College of Medicine, November 1966).

[3]W. Brown, *Exploration in Management* (New York: Wiley, 1960), Chapter 2.

[4]E. Jaques, *Measurement of Responsibility* (Cambridge, Massachusetts: Harvard University Press, 1956), Chapter 3.

The discretionary content of work consists of all those elements in which choice of how to do a job is left to the person doing it. Here a worker is authorized and expected to use discretion and judgment as he proceeds with his work, overcoming obstacles by picking what he considers the best of the alternative courses available at each stage, and pursuing the course he has chosen.

Here we see just what the contribution of education, training, and experience means to a career and why these are essential. In effect, they provide the knowledge about alternative methods and their consequences as they relate to achieving the results of work. The individual first entering upon a career, on the whole, lacks knowledge and experience about specific results and methods, and hence his performance must be largely prescribed. By the same token, employers providing career opportunities must be in a position to distinguish, specify, and scale prescribed and discretionary duties carefully so that the job experiences and related training together contribute to the growth process, the gradual development of discretionary duties, and the assumption by the worker of the coincidentally increased responsibility.

It is important to note that the tasks themselves do not have absolute prescribed or discretionary content. The task of sweeping the floor with a broom may have been prescribed for one worker and may be the result of discretionary responsibility for another. This fact calls attention to how even the simplest tasks can be structured as parts of jobs or careers. In jobs for "hands," tasks are largely prescribed to be done in a specified way to achieve a particular result. In careers, tasks are designed with significant discretionary content so that an individual is trained in various options and is increasingly authorized to use his judgment in selecting one or another way to achieve the specified result. In their work, Brown and Jaques point out that they have never found a job in which both prescribed and discretionary aspects were not present in some degree.

One other aspect should be clear about these two different types of elements, and that is that discretionary elements are not immediately apparent. To the superficial observer, all that he sees may seem to be prescribed because work done properly and effectively is a smooth, rhythmic, directed performance in which options concerning alternatives have long since been decided, either by management or by the worker. However, if the options are determined by the worker with the authorization of management, the performance will be the result of his discretion.

This general framework for understanding the design of tasks and their organization into jobs and careers is further illuminated by the concepts of functional job analysis.

Functional Job Analysis (FJA).[5] Functional Job Analysis distinguishes between *what gets done*—the what/how of technology concerned with machines, tools, techniques, processes, and end results—and *what the worker does*—the what/how of the worker's physical, mental, and interpersonal activity. "What gets done" categories are referred to as work fields; "what the worker does" categories are referred to as worker functions. Two examples should help make this distinction clear.

In urban development work, sites get surveyed and laid out and plans get drafted. The surveying, laying out, engineering and drafting are technological activities (work fields) referring to what gets done. Many different workers contribute in different ways to getting this work done. These different ways (worker functions) include handling, manipulating, and/or precision working in relation to things (tools, equipment, materials); computing, compiling, analyzing and/or coordinating in relation to data; and taking instructions, exchanging information, consulting, and supervising in relation to people.

In urban development work also, sometimes opinion and attitude surveys need to be made to generate information concerning slum clearance or a new expressway. The opinion survey or investigation is what gets done. But, this can be done in different ways; for example, by mail questionnaire, by telephone, by door-to-door questionnaire completed with pencil and paper, or by door-to-door questionnaire using a tape recorder. In each instance the worker functions somewhat differently, calling on different combinations of skills.

As is perhaps evident from these examples, two different vocabularies are involved which, because of common usage, are sometimes difficult to shred apart. However, despite the intimate relationship—two sides of the same coin, so to speak—the distinction is fundamental because it provides a framework for understanding the structure of tasks in jobs regardless of whether they are prescribed or discretionary.[6]

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[5]FJA is an outgrowth of research directed by the author at the United States Employment Service, 1948-1959. One result is the revised occupational classification system of the Third Edition (1965) of the *Dictionary of Occupational Titles.* (See also: S. A. Fine, "The Structure of Worker Functions," *Personnel and Guidance Journal,* 1955, pp. 34, 66-73; and S. A. Fine, "Functional Job Analysis," *Personnel Administration and Industrial Relations,* Spring, 1955.)

[6]The distinction has been formalized in the codes of the new occupational classification system of the *Dictionary of Occupational Titles,* where the first three digits of the six-digit code refer to what gets done (work fields) and the last three to what workers do (worker functions).

The worker functions are the ones that primarily concern us here, since they represent the range of ways in which workers perform in all jobs, the molds according to which their tasks are cast, and hence, the elements of the job design.[7] What workers do (worker functions) in the appendix chart are arranged in three hierarchies. The particular functions in each hierarchy are unique to it and proceed from the simple to the complex; that is to say, from those in which the prescribed duties are relatively few and dominate the job content to those in which the prescribed duties can be quite numerous, but are nevertheless overshadowed by the discretionary job content. They are, in effect, basic building blocks or modules; and, because they range from the simple to the complex, the direction of career growth is implicit in them.

The focus of the functions upon things, data, and people corresponds to the potential of a worker as represented by his interacting systems—physical, mental, and interpersonal. His potential to master the prescribed and discretionary content inheres in these systems and in the adequacy of his education and training.

Critical incidents. In addition to defining the functions of a job in a career ladder, it is necessary to recognize effective and ineffective performance, particularly as such performance relates to discretionary duties. Workers interact with job demands, moving between the prescribed and discretionary duties of their jobs and between levels of functioning. Their potential tends to be evidenced by the effectiveness or ineffectiveness of their discretionary performance. These are critical incidents. They often reflect the unexpected, unspecified events.

Flanagan has pointed out that a listing of the duties and responsibilities connected with a job, even though the list seems complete, may leave out requirements which are of a critical nature.[8] For example, the primary duties of a bottle-capping machine operator would be stated as "Insert bottles one at a time into the capping machine, depress capping lever, remove bottle, and examine for security of the cap." A worker on this job would more likely be considered outstanding and show his potential if he seldom caused a work stoppage on the production line by permitting his machine to run out of caps than if he capped bottles at a very high rate.

As Ghiselli and Brown have noted, "There are some kinds of behavior that are especially critical in the sense that they are much more likely

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[7]See Appendix.

[8]J. C. Flanagan, "Critical Requirements: A New Approach to Employee Evaluation," *Personnel Psychology,* 2, 1949, pp. 419-425.

to lead to administrative actions or judgments concerning the worker than is the goodness or poorness which characterizes his performance of the prescribed duties and responsibilities."[9]

Out of these critical incidents, then, a job may develop and a worker may grow. The observation of such critical incidents becomes the basis for evaluating performance (whether done systematically or not), indicating the worker's capacity to meet the challenges of the job, whether he is in need of help or performing beyond normal expectations.

Supervision and Performance Evaluation

The emphasis in supervision is usually upon the attainment of production standards. However, it is equally important, perhaps more so, for supervision to recognize the potential of workers and aid and abet their growth and careers. Some observers even argue that if supervisors paid more attention to their human function—"growing people"—"getting the work out" might well take care of itself. Certainly, there is some truth in this position, even if it is too strongly stated as a generality.

Here are some of the specific roles of supervision that need to be recognized as crucial to the proper development of a career:

A. The supervisor is the human embodiment of management's commitment. Regardless of what management *has said* about the job, it is what the supervisor *does* that will convey the message.

B. The supervisor must be clear and specific concerning prescribed and discretionary content of assignments. These must be consistent with the functional definition of the job and the expectations of the worker. On this basis the supervisor can make preliminary evaluations of how well suited the worker is to the job demands.

C. The supervisor must be able to expect the unexpected and observe and report the critical incidents which suggest performance below or beyond expectations.

D. All of the above must show up in an interest in the worker as much as an interest in the work. Such an interest will be sensitive to the need to change from close to general supervision within the framework of the functional requirements of the job.

Pay and Fringe Benefits

The career situation defines from the very outset a gradual and reasonable rise in pay, both within a given position in the career ladder and

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[9]E. E. Ghiselli and C. W. Brown, *Personnel and Industrial Psychology* (New York: McGraw-Hill, 1955), p. 37.

for each step upward. The increments may be small relative to the number of steps in the ladder, the nature of the work, the type and prosperity of the industry, etc., but they are definite and spelled out in advance. The time to be spent in each position may be made equally explicit, although this may be stated in terms of ranges to accommodate differences of ability and turnover.

A probationary period may be specified for the entry position. This may be an anxious period, but it is, nevertheless, quite legitimate. After all, the worker is free and may want to quit if he doesn't find the situation suitable. The fact that the employer establishes a probationary period is an additional sign of his commitment to the worker if he turns out to be suitable. Usually, the probationary period is concluded with the first pay increment.

Some of the other compensation devices usually characteristic of a career and not of a job are: health insurance (usually partially paid by the worker); sick and annual leave (the latter increasing to a maximum with years of service); investment in a pension plan; participation in credit unions; stock sharing; and end-of-year bonus payment.

Training

A career implies development of one's potentialities, and therefore opportunities for education and/or training. For many jobs this may be entirely limited to on-the-job training provided either by a more experienced worker and/or the supervisor. For more and more jobs such training includes some off-the-job classroom training, either in the plant or in some special school outside the plant. These latter situations tend to be relatively common for technical and professional jobs. However, as technology becomes more complex and installations more costly, even machine production employees are being given periods of from one day to two weeks of intensive training on the new equipment off the job. This, of course, is done with a continuation of regular pay.

The commitment of employers to careers for their employees sometimes extends beyond training in job content. Some employers, for example, are providing literacy training on the grounds that better educated employees make better all-around employees with greater potential for promotion.[10]

With the commitment to training, the employer must also define positions in the career ladder that provide for upward mobility. Clearly,

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[10]"Dropouts Go Back to School at Work," *The Milwaukee Journal,* May 4, 1967.

this is self-insurance for the employer so that he is first in line to reap the benefits of the training. Otherwise, the increased employability resulting from the training will lead the worker to job opportunities in other establishments. It is fear that they will not directly benefit that discourages many employers from providing training.

If possible, training programs and their timing should be included in the description of a program of career development so that a worker may see the growth possibilities in his situation right from the start. Along with the commitment of the employer, it would be desirable for workers to commit themselves to continuing education. However, in view of the infinite variety of conditions and capabilities of workers, it is idle to assume that this commitment can be on an equal basis. The best that can be expected is a positive response if the facilities and opportunities are clearly defined.

Strategic Guidelines

Whereas technical guidelines are concerned with the methods and procedures of comprehending and organizing the content of tasks, jobs, and training, the strategic guidelines are concerned with the disposition of time, money, and effort in introducing and achieving acceptance of careers into the world of work. They involve both immediate and long-term considerations. They are also concerned with understanding people and leaders so that the tactics used to achieve recognition help rather than hinder the development of new careers. Specifically, the focus of strategic guidelines is on *who* (the most immediate beneficiaries of new careers), *what* (the target work fields for which new careers will be designed), and *how* (approaches to be used in defining and winning acceptance for new careers).

Who Are the Beneficiaries?

Who will be the beneficiaries for whom new careers should be developed at this point in time? While the obvious answer that follows from the guideline of commitment to equal opportunity for all is, "everyone without discrimination," this ignores the fact that the immediate stimuli for the new careers movement are the disadvantaged and the poor who have in the past been excluded from involvement in careers. After all, the career idea is not new for the middle class or even the upper levels of the working class. Apprenticeships and attendance at technical schools, business colleges, and academic colleges has been a normal, everyday part of their existence. However imperfectly it has operated, entering upon and following a work career has been common for this large

majority of our population. In fact, that this has been so is an important basis for affluence in our society. Obviously, if the advantaged are to compete on an equal basis for new careers with the disadvantaged, the latter will continue to be excluded. Hence, the poor and disadvantaged should be given primary consideration and extra assistance, particularly in those new careers which are oriented to community services in the area where they live.

It is, of course, argued that such emphasis is a waste of time because the poor and disadvantaged are not motivated to better themselves and, in fact, that is why they are poor. This is an old generalization and until recently it even had the aura of truth. However, as the result of the experiences of the antipoverty programs, it is a rationalization that will no longer hold up completely. The following item reporting on the current Congressional Senate Committee hearing discussing the pros and cons of continuing the poverty program summarizes what is now known and believed by responsible people:

> The poor have shattered at least two stereotypes. First, that they lack motivation, and secondly, that they do not have sufficient knowledge or know-how to run their own programs. The success of a number of indigenous groups in drawing up meaningful programs and subsequent ability to reach the community tends to belie these arguments.[11]

Article after article in the daily press, reporting programs sponsored by the Office of Economic Opportunity and the Department of Labor, attest to the initiative and motivation of even the hard-core disadvantaged. Certainly failures can be found among them, but a closer examination of many of the failures has revealed, along with personal inadequacy, insincere and superficial programs sponsored by the middle-class community which, in effect, have attempted to lead the poor back to dead-end jobs. Many poor no longer want such jobs. These jobs barely provide them with subsistence; from an economic point of view, the jobs are little, if any, better than welfare. Like welfare, they rob the poor of their dignity as effective human beings.

Thus, while the poor and disadvantaged have shown that they can accept and meet the challenges of opportunity despite much reason for distrust, it is not at all clear that middle-class society is ready and willing to provide and sustain opportunities for challenging work and upward mobility for the disadvantaged.

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[11]"Jobs Due to Cool N.Y. Summer," *Christian Science Monitor,* June 2, 1967.

What Work Fields?

There is no need to be dogmatic or academic about this question. After all, if career orientation of jobs helps solve manpower shortages and pays off in development of human resources, then all work fields should be included and, in time, undoubtedly will be. However, at this point in time, the poor and disadvantaged are justifiably suspicious of enticement back into restaurants, laundries, dry cleaning establishments, and the like where so many jobs are going begging. Traditionally, these have been the dead-end jobs in which they have been ruthlessly exploited.[12]

More fruitful fields of work for career development would seem to be the newly emerging community services fields. These include health services in traditional settings such as hospitals and in the new mental health and maternity centers; community relations, both in traditional welfare settings and in neighborhood storefronts; urban planning, including site surveying, drafting, and opinion gathering; teaching (as aides and assistants); recreation; and libraries. In the first place, these are relatively new areas with new jobs and new careers emerging, requiring a whole range of skills and training from the simple to the complex. They do not have the onus associated with jobs in restaurants and the like. Second, many of the poor and disadvantaged seem to have an adaptive skill base more suitable for dealing with people, particularly those people who have similar problems and aspirations. A third reason is that there are tremendous shortages in these fields of work with few trained people to step into the emerging jobs. Finally, through jobs in these work fields, the disadvantaged are, in effect, helping themselves.

How Initiate Careers?

Essentially, there are two models for initiating new careers, both having their origins in the way careers emerge more or less naturally in the world of work. The first is the result of breaking down existing professional or skilled jobs and generally separating out the simpler tasks.[13] The second is a developmental approach starting with the defini-

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[12]It should be pointed out that enlightened managements of some large chains like Hot Shoppes, McDonald's, Horn & Hardart Co., and Hilton and Sheraton Hotels have been making sincere efforts to organize their jobs into career systems with some success in attracting and holding employees, as compared to other similar establishments that have not done so.

[13]This model is exemplified by an item in the Labor Letter of *The Wall Street Journal,* May 9, 1967, describing it as a way in which employers are dealing with manpower shortages:

[*continued*]

tion of public and/or technological needs, and followed by the design of tasks to meet those needs. Depending upon circumstances and pressures, there would seem to be a place for both approaches to be followed.

On the whole, the first approach might be more suitable for craft and technician jobs, since in these areas there is a healthy tradition of giving credit for experience and for performance ability to be recognized for its own sake.[14] It is likely to be a less fruitful approach in the case of the professions. Since much thought and effort are being expended on the development of *nonprofessional* or *subprofessional* careers, it is useful to examine some of the assumptions made in these areas that are quite debatable.[15] Five such assumptions will be considered here:

1. *Existing professions fully meet public needs at which they are aimed.* It follows, then, that since the need is "covered," so to speak, there is no room for a new career and that tasks must indeed be separated out from existing careers to constitute new jobs. The developmental approach assumes that needs are broader than professions that presume to cover them, and that from time to time such needs and their coverage are amenable to reassessment. Thus, on the basis of the first approach, the nurse's aide emerged as a job; but, on the basis of the second, physical and occupational therapists emerged as professions alongside the registered nurse.

2. *Professionals recognize their limitations and actively seek and welcome nonprofessional careerists to help them meet public needs.* This assumption is often verified in individual conversation with dedicated careerists seeking to fulfill the objectives of their profes-

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The aim is to remove from professional and skilled workers' jobs routine tasks that less skilled employees can do. A Dallas electronics concern created a new position of "non-degree engineer" to handle technical tasks. Foxboro Company in Massachusetts frees highly trained technicians for more sophisticated tasks by training others to build electronic circuit boards. Massachusetts General Hospital begins using technicians rather than doctors or nurses to operate oxygen pumps during operations. Cleveland area welfare officials seek to hire 80 Welfare Aides to handle paperwork for overburdened social workers.

[14]Once having attained the ability, however, the worker may need to maintain his status in order to obtain work by membership in a union, or similar group, and/or by periodic license renewal.

[15]The writer does not favor the use of the terms "nonprofessional" and "subprofessional" because of their degrading, subordinate implications, despite their inclusion of the word "professional." However, for the moment, they are the terms in use, and at least have the virtue of being commonly understood. An important task faced by designers of new careers is to eliminate these terms and to substitute for them expressions more descriptive of the work functions performed.

sion. It may even be true of groups of professionals in certain localities. Thus, in some communities teachers have welcomed teacher aides. However, by and large, for professions as a whole, the opposite attitude is probably more common. And this is natural since all professions have achieved their identity by being exclusive and by raising and tightening requirements. This has been well documented, especially during the past generation, and is as true for organized skilled craftsmen as it is for professionals. This negative attitude of exclusion is generally justified on the basis of maintaining high standards of performance and minimizing charlatanism. Even where a lower level of personnel has been allowed into a profession (for example, occupational therapy), the senior professionals make every attempt to restrict it and keep it in its place. The job that has been created is not a rung in a ladder. No amount of experience as an occupational therapy assistant is recognized as a substitute for the four to five years of college training necessary to certify as an occupational therapist. Other professions (for example, physical therapy) will not even permit a category of subprofessional, regardless of need and socioeconomic pressure.

3. *There are professional and nonprofessional tasks; this is what distinguishes between professionals and nonprofessionals.* Presumably simpler tasks are nonprofessional and more complex ones professional. Thus the simpler tasks being performed by a professional are fair game for separation out into so-called nonprofessional or subprofessional jobs, and these can serve as first steps in achieving professionalism. But this is not the way it is. The simpler tasks are not the first step toward professionalism. In fact, even the performance of the more complex tasks does not make one a professional. Task performance is not the heart of the matter: what matters are the rites of passage—the commitment to training, to attendance at authorized schools, to securing credentials, to memberships in professional organizations, to subscription to a code of ethics, etc. In fact, doing all of these things and not performing the tasks at all can still make one a professional, but performing the tasks without submitting to the rites of passage rarely makes one a professional. Even a "grandfather" provision (certification as a professional on the basis of long experience attained prior to the existence of formal professional preparation) is fast disappearing.

4. *Professionals want to work at the most difficult and "professional" tasks at all times.* They therefore welcome giving up simpler tasks.

This may be true for some individuals, but not for all—probably not for the majority. The present writer has interviewed hundreds of professionals: engineers, bioscientists, psychologists, counselors, and others, and in general has found that most professionals want to range over the continuum of difficulty. This includes doing such "menial" things as washing test tubes, sketching graphs, computing statistics, compiling bibliographies, and typing reports. Not that they don't welcome help at times—rather it's a matter of pacing, variety, conservation of energy, and time to think. Few professionals want to be stretched to their limits at all times. Furthermore, having others perform these tasks frequently breaks up the continuity of a professional's activity, and requires him to supervise, a task he does not ordinarily relish.

5. *Putting together simple "nonprofessional" tasks constitutes a first step in a career ladder.* Unfortunately, this is rarely the case, regardless of how it is made to look. What is thus constituted is a job, and more often than not, it is a "servant" job. There is no on-the-job provision (training and/or credit for experience) to attain higher rungs in the professional ladder, although in many instances the longevity commitment is made. For example, nurses' aides can only obtain the status of registered nurse by leaving their jobs and going into nurses' training school. On the other hand, they can receive tenure, in-grade increments, and the like. Mere proximity to professionals does not result in professional careers. Unless conceived in a career context, aide or assistant positions may turn out to be low-paying, dead-end jobs which frustrate the workers.

The examination of the above assumptions involved in the initiation of nonprofessional careers suggests how easy it can be to confuse technique and strategy. For example, as a short-term strategy, it may be wise to constitute jobs out of low functional level tasks found in professional jobs in some of the new work fields discussed above. The virtue of this strategy is that it can alleviate manpower shortages and provide quick employment where this is a pressing need. But unless this strategic move is immediately followed up with the technical considerations outlined above, it can fail to build nonprofessional careers.

In the long run, the developmental strategy probably provides a sounder basis for initiating new careers in the professional work fields. Using this strategy, the first step is to determine what needs to be done to achieve a particular objective—let us say, urban planning. This is followed by an examination of the states-of-the-arts involved to establish the technologies and various alternatives available to get the work done.

On this basis, it is then possible to move directly into the technical considerations described above, whereby: (1) the work that needs to be done to achieve objectives is clearly delineated; (2) the optional ways in which workers can perform the work are explored; (3) the functional performances of the workers are decided upon in relation to the technologies to be used; (4) the functional performances are then organized into jobs; (5) the jobs are related to each other by delineating experiences which lead to higher functional performance; and (6) curricula are developed that lead to achievement of competencies necessary to promote to each higher functional level.

Since this approach starts with needs rather than with existing professions, it can lead to proposals to realign certain tasks already being performed by some professionals. Needless to say, it is therefore absolutely essential that this approach have the cooperation of incumbent professionals, particularly those specializing in curriculum and certification in specific work fields.

This will not be easy, since the professionals will need to resolve the inherent conflicts between professional identity and dedication to achieve objectives. However, short term or long term, sooner or later, every profession must face this problem and reassess itself in terms of available criteria, changing states of the relevant arts, and its ability to supply manpower in its area of specialization.

At the very least, the longer term developmental strategy lays open the sensitive areas and provides the criteria and reference points with which the shorter term strategy must eventually be concerned. Clearly distinguishing between strategy and technique has the effect of establishing the proper place for the guidelines appropriate to each, and of freeing the effort expended from the kinds of rationalization that, in effect, substitute strategy for technique.

A Suggested Application

How can these guidelines be effectively brought together in a model approach to the problem? Needless to say, there are probably as many models possible as there are varying circumstances. The one to be suggested here is for the purpose of providing a focus for support monies, should they be available to make a substantial attack upon the problem. It is also conceived in terms of conditions that need to be faced and coped with and that might be generalizable to other situations.

It is proposed that most of the money available for exploring the implementation of a new careers program be concentrated in a single city of about one million people containing an effective municipal civil

service willing to commit itself wholeheartedly to pursue the implementation of a new careers program. The following are the reasons for the selection of such a site.

1. A city this size faces the range of problems of both larger cities and cities half its size. Experience in such a context would appear to have wide applicability.
2. Municipal civil services have a history and tradition of recognizing experience as a substitute for education, and of qualifying persons for entry and promotion in career ladders.
3. Municipal civil services have a primary concern with the labor shortages and skill training problems associated with emerging work fields, such as health services, education, social welfare and rehabilitation, public safety and law enforcement, housing, etc.
4. These work fields present varying types of career ladders, contain both old and new job classifications, and involve various degrees of professionalization. They therefore offer the opportunity for designing and negotiating career ladders appropriate to many different kinds of conditions.
5. A municipal civil service may well become the employer of last resort in dealing with hard-core unemployed. It will therefore be impelled to deal with its employment and training problems in the most constructive way possible.
6. Because of size and prestige, it is in a position to establish precedents that could spread to related agencies in the private sector. In any case, it will have to deal with employee groups that relate to both the civil service and the private sector.
7. By focusing on the several services of a single community, no one professional organization, union, or other employee organization needs to feel picked on in the sense of having to make sacrifices and set precedents that will be embarrassing.
8. This could be coordinated with a "model cities" planning program which is likely to be moving in the same direction and to be motivated highly to obtain the kinds of personnel indicated.

In carrying out this feasibility study, several problem areas should receive special attention:

1. *Determining methods for qualifying hard-core unemployed and disadvantaged on the basis of adaptive skills alone for entry into jobs, if necessary.* Here the initiative of the federal civil service might

well be followed. It has designed an experimental procedure to qualify people for its "A" level jobs on the basis of background information concerning:

Reliability and dependability.
Job readiness (willingness to come to work).
Willingness to do uncomfortable work.
Ability to work safely without harming oneself.
Willingness to follow direct orders.
Interest and motivation to work at "A" level.

The last factor is given the heaviest weight in arriving at a rating, assuming that applicants meet the requirements of the first screen-out element. A further step might be to assign functional levels to basic job tasks, and establish time periods to be spent at these tasks which could be considered as qualifying for the next higher step on a ladder. The relative merits of examinations, work sample tests, performance ratings, and time periods could be explored for certifying purposes.

2. *Exploring procedures suitable for dealing with institutional rigidities.* As indicated, several different kinds of professional organizations will need to be dealt with for the work fields listed above. They are likely to have tackled the problem of nonprofessional support in different ways, and to have expressed more or less resistance in accepting and extending career ladders from the bottom to the top. Faced with the immediacy of manpower and skill shortages, recruitment and turnover problems, etc., and the commitment of a powerful civil service to deal positively and constructively with these problems, they will no doubt be disposed to cooperate (but with varying types of assurance) to maintain their standards and integrity. The thorough documentation of approaches and resolutions of such negotiations could be an important input to other communities and to state and national levels of the respective professional organizations. We need to know the varying impact of different national groups upon a local branch, and also how the circumstances of a community might affect one or another of these organizations. It may even be feasible to allocate funds to one or more of such local professional organizations to establish their own initiative toward subprofessional careers within the context of the same community.

3. *Determining job analysis methods suitable for defining career ladders.* The use of several approaches has been indicated, but not enough is known concerning their large-scale use and their relative accepta-

bility to civil service, professional, and union groups. We need to have the experience of training task forces from these organizations in the methods of designing career ladders and then learn how comfortable these task forces are working with the methods.

4. *Determining the relative usefulness of the "breakdown" and developmental approaches in designing new careers and the time factors involved in each.*

   A. Does the breakdown approach really save time? Is the time saved spent later in dealing with many unresolved problems?

   B. Is the developmental approach feasible? Practical? Does the lack of existing structure create too much anxiety? Does an open-ended attack upon needs create too many "crosswinds"—cross too many "professional" or "craft" lines?

   C. Are there other approaches that might prove to be more practical?

5. *Exploring various methods which would allow for continuing education.* To what extent should both worker and agency contribute time and training costs? Should the level of the job on the career ladder affect these decisions? To what extent should training be given on the job? Off the job in the agency? Off the job in a technical school, community college, etc.? How will training times be coordinated with work operations?

By studying all of these problems in a single community, the conditions under which solutions can be worked out will be kept constant and the possible facilitating aspects of interaction effects can be observed.

Summary

The design of new careers involves technical and strategic considerations but, above all, employer and community commitment. It is commitment on the part of employers that transforms dead-end jobs into opportunities for growth. This is fundamental. Once commitment is established, then technical and strategic guidelines become relevant.

Technical guidelines include:

- Titling to reflect the commitment to a career.

- Selection procedures that recognize the range and development of potential, and do not exclude on the basis of irrelevant and unnecessarily high criteria.

• Structuring of tasks to allow for higher functional attainment and increase of discretionary functioning.

• Supervision that implements the growing of people, as well as the achievement of production standards.

• Provision of regular increases in compensation to correspond with increased experience and competence.

• Provision of training and growth opportunities for those who can and need to achieve higher functional performance.

Strategic guidelines include:

• Directing opportunities for new careers primarily at the poor and disadvantaged.

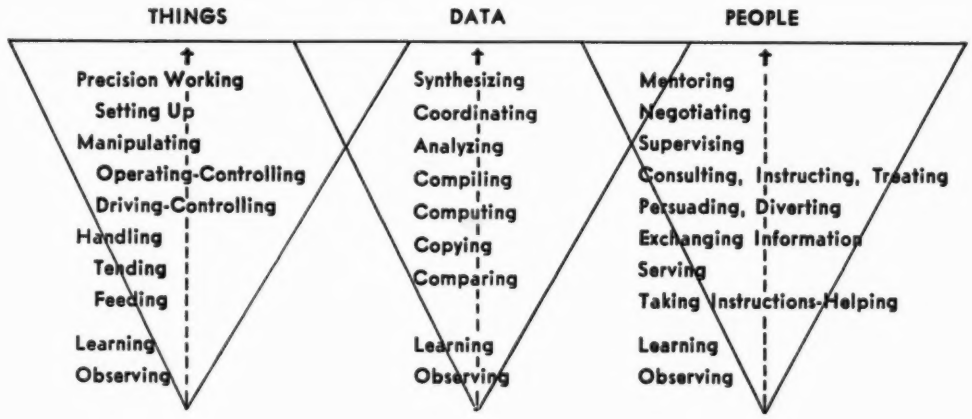
• Developing new careers primarily in the newly emerging community and health services work fields.

• Initiating new careers by resorting to both short- and long-term approaches, and especially avoiding assumptions that ignore the realities of professionalization.

It is important to keep the technical and strategic considerations separate so that the various people and groups that are inevitably involved in designing new careers may see where they stand and assume an appropriate stance with regard to their occupational identities and professional objectives.

Appendix

What Workers Do*
(Worker Functions)



*See *Dictionary of Occupational Titles*, 3rd Edition, Vol. II, 1965, pp. 649-650, for the worker-function array in use by the U.S. Employment Service in its present coding system. There are some minor differences between it and the one illustrated here.

Note:

Each successive function reading down usually or typically involves all those that follow it.

Feeding, tending, driving-controlling, operating-controlling, and setting up are special cases involving machines and equipment of handling, manipulating, and precision working respectively, and hence are indented under them.

The hyphenated functions: operating-controlling, driving-controlling, and taking instructions-helping are single functions.

The functions separated by a comma are separate functions on the same level, separately defined. They are on the same level because empirical evidence does not make a hierarchical distinction clear.

Learning and observing are adaptive functions basic to functioning in all three areas.